WHAT IS CLAIMED IS:

1. A liquid crystal driver comprising:

a periodic waveform generator which generates a periodic waveform signal;

a phase shifter which receives the periodic waveform signal from said periodic waveform generator and shifts phase thereof according to an instructed value;

an inverting element for inverting an output signal of said phase shifter;

a potential divider comprising a plurality of resistors connected in series, being connected to the output signal of said phase shifter and to the output signal of said inverting element at two ends thereof; and

a liquid crystal element comprising electrodes of a plurality of areas and a common electrode opposing the electrodes, said common electrode being connected to the periodic waveform signal outputted by said periodic wave generator, said plurality of areas being connected to output voltages of said potential divider.

2. The liquid crystal driver according to claim 1, wherein the waveform outputted by said periodic waveform generator is sine wave.

3. The liquid crystal driver according to claim 1, wherein the waveform outputted by said periodic waveform generator is a square wave having duty ratio of about 50 %.

4. The liquid crystal driver according to claim 1, further comprising an amplitude controller which controls voltage amplitudes of the periodic waveform of said periodic waveform generator, the output signal of said phase shifters and the output signal of said inverting elements.

5. The liquid crystal driver according to claim 1, wherein two resistors provided at two ends in each of said potential dividers are variable resistors.

6. The liquid crystal driver according to claim 1, wherein two resistors provided at two ends in each of said potential dividers have resistances twice or more those of the other resistors therein.

7. The liquid crystal driver according to claim 1, wherein phase difference between the output signal of said periodic waveform generator and said phase shifter is changed around a center of +90° or -90°.

8. The liquid crystal driver according to claim 1, wherein said periodic waveform generator comprises a digital circuit which inverts bits in an output port periodically.

9. The liquid crystal driver according to claim 1, wherein said electrode portion in said liquid crystal element comprises a plurality of concentric areas.

10. The liquid crystal driver according to claim 1, comprising a plurality of said phase shifters, a plurality of said inverting elements each of which corresponds to one

of said plurality of said phase shifters, and a plurality of said potential drivers each of which corresponds to one of said plurality of said phase shifters.

11. A liquid crystal driver comprising:

a periodic waveform generator which generates a periodic waveform signal;

a plurality of phase shifters provided for phase shift in a plurality of directions, each of said plurality of phase shifters receiving the periodic waveform signal from said periodic waveform generator and shifts phase thereof according to an instructed value for each direction in the plurality of directions;

a plurality of inverting elements for inverting output signals of said plurality of phase shifters;

a plurality of potential dividers each comprising a plurality of resistors connected in series, being connected to the output signal of one of said phase shifters and to the output signal of one of said plurality of inverting elements at two ends thereof; and

a liquid crystal element comprising electrodes of a plurality of areas extending in the plurality of directions and a common electrode opposing the electrodes, said common electrode being connected to the periodic waveform signal outputted by said periodic wave generator, said plurality of areas being connected to output voltages

of said plurality of potential dividers.

12. The liquid crystal driver according to claim 11, wherein the waveform outputted by said periodic waveform generator is sine wave.

13. The liquid crystal driver according to claim 11, wherein the waveform outputted by said periodic waveform generator is a square wave having duty ratio of about 50 %.

14. The liquid crystal driver according to claim 11, further comprising an amplitude controller which controls voltage amplitudes of the periodic waveform of said periodic waveform generator, the output signal of said phase shifters and the output signal of said inverting elements.

15 The liquid crystal driver according to claim 11, wherein two resistors provided at two ends in each of said potential dividers are variable resistors.

16. The liquid crystal driver according to claim 11, wherein two resistors provided at two ends in each of said potential dividers have resistances twice or more those of the other resistors therein.

17. The liquid crystal driver according to claim 11, wherein phase difference between the output signal of said periodic waveform generator and said phase shifter is changed around a center of +90° or -90°.

18. The liquid crystal driver according to claim 11, wherein said periodic waveform generator comprises a digital

circuit which inverts bits in an output/input port periodically.

19. The liquid crystal driver according to claim 11, wherein said electrode portion in said liquid crystal element comprises a plurality of concentric areas.

20. The liquid crystal driver according to claim 11, wherein each of said plurality of potential dividers has an output terminal in correspondence to a half to total resistance thereof, and the output terminals of said plurality of potential dividers are connected to each other.

21. An optical head comprising:

a light source;

an object lens for converging a light beam emitted by said light source; and

a liquid crystal element arranged between said light source and said object lens;

wherein said liquid crystal element comprises electrodes of a plurality of areas in a plane perpendicular to an optical axis of a light beam reflected from an optical disk and a common electrode opposing the electrode portion via a liquid crystal layer, said electrodes comprising first electrodes used for correcting the light beam transmitting when no shift of said object lens occurs relative to the optical axis, an at least one second electrode provided adjacent to said first electrode groups in a first direction

along which said object lens is shifted, and an at least one third electrode provided adjacent to said first electrode groups in a second direction opposite to the first direction.

22. The optical head according to claim 21, wherein said second and third electrodes comprise an electrode having a curved long shape relative to a center position which corresponds to the optical axis when no lens shift of said object lens occurs.

23. The optical head according to claim 21, said second and third electrodes comprise an electrode having a curved long shape relative to a center position which corresponds a position shifted by a predetermined distance from the optical axis when no lens shift of said object lens occurs.

24. The optical head according to claim 23, wherein the predetermined distance is 100 to 250 micrometers.

25. The optical head according to claim 21, further comprising a liquid crystal driver comprising a periodic waveform generator which generates a periodic waveform signal, a phase shifter which receives the periodic waveform signal from said periodic waveform generator and shifts phase thereof according to an instructed value, an inverting element for inverting an output signal of said phase shifter, a potential divider comprising a plurality of resistors connected in series, being connected to the output signal of

said phase shifter and to the output signal of said inverting element at two ends thereof, wherein an output of said periodic waveform generator is connected to the common electrode, and outputs of said potential divider are connected to first electrode groups in said liquid crystal element;

a first signal changer which applies selectively an output of said potential divider to the at least one second electrode;

a second signal changer which applies selectively an output of said potential divider to the at least one third electrode;

a lens shift quantity detector which detects shift quantity of said object lens relative to the optical axis; and

a lens shift correction controller which outputs a selection signal to said first or second signal changer according to the shift quantity of said lens shift quantity detector.

26. The optical head according to claim 25, wherein each of said first and second signal changers comprises an analog switch.

27. The optical head according to claim 25, wherein said lens shift correction controller sends a first selection signal to said first and second signal changers to

select outputs of said potential divider connected to said first electrode groups when lens shift does not exceed a predetermined level, said lens shift correction controller sends a second selection signal to said first signal changer to select first outputs of said potential divider connected to said first electrode groups adjacent to said at least one second electrode or outputs of said potential divider around the first outputs when lens shift exceed the predetermined level in a direction towards said at least one second electrode, and said lens shift correction controller sends a third selection signal to said second signal changer to select second outputs of said potential divider connected to said first electrode groups adjacent to said at least one third electrode or outputs of said potential divider around the second outputs when lens shift exceed the predetermined level in a direction towards said at least one third electrode.

28. The optical head according to claim 27, wherein the predetermined level is 100 to 250 micrometers.

29. The optical head according to claim 27, wherein the predetermined level is substantially a half of traverse shift quantity.

30. The optical head according to claim 25, further comprising an eccentricity detector which detects eccentricity component of optical disk, wherein said

eccentricity detector corrects lens shift component due to eccentricity according to the eccentricity component detected by said eccentricity detector.